

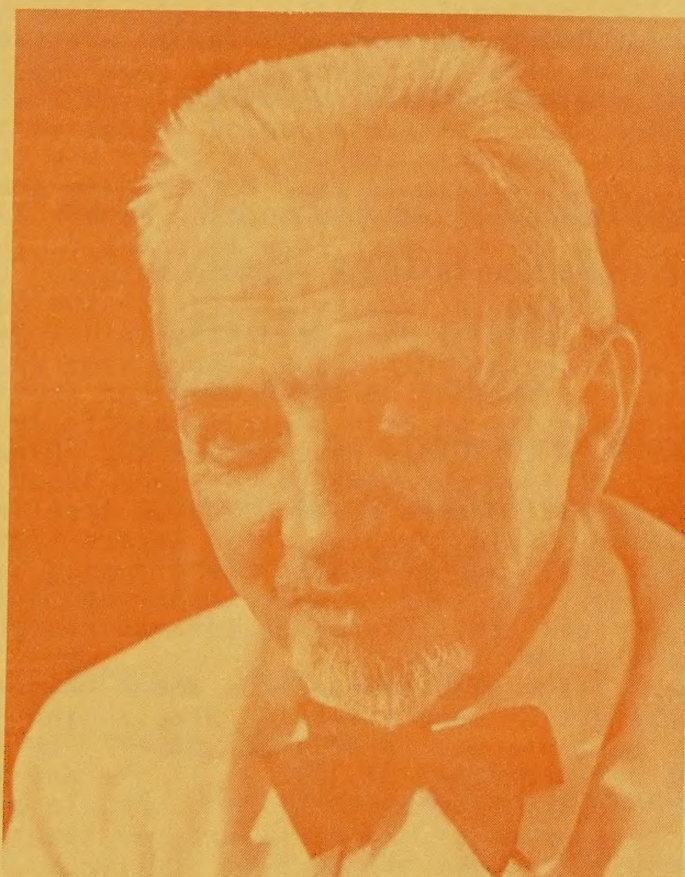
THE CAT'S WHISKER

BULLETIN OF THE CANADIAN VINTAGE WIRELESS ASSOCIATION

VOLUME 7 NUMBER 1

MARCH 1977

A.D. CHALLONER Editor



CHARLES A. LOWRY

1895

1976

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NOTE: PLEASE SEND ALL CVWA CORRESPONDENCE TO OUR CAPABLE SECRETARY;
ALL BULLETIN NEWS/ARTICLES TO THE EDITOR ;DUES AND ADS TO SID!

Editor's Notes

Well it looks like spring is finally and it's time to hit the old radio trail or rummage for those vintage books or whatever is your pleasure. Now that I've done the painting and papering I get to finally unpack all those dear old radios waiting patiently in their boxes in our basement. I think that I will also add a fringe lamp, a wicker chair or table, just to keep them company in their new home. What are your plans? Finally getting down to that restoration project or maybe some spring cleaning? Don't forget the auction at our 23 April meeting!

I want to thank you all for your kind response to The Cat's Whisker; I had some apprehension about recent changes. Did you notice, for instance, that the 'hobo' print style used for the new front cover logo is the same as that used by Hugo Gernsback in his Radio News of the 1920's? Still, as I review this issue I have some regrets. I would like to see more response from the members on their own construction or restoration projects, or even their favourite set or tube. Maybe even a historical note that they have uncovered. Please note that I have excellent support from our members for this issue, but not in the first-mentioned areas. Thanks go to Mike Cox (meeting notice and program), Aaron Solomon, Noble Haughton, Mike Batsch (for suggesting articles on Tesla and CFRB) and of course our old pals Sid and Bert. Next issue is promising to be equally well supported, but once again mostly from the historical end. Please be assured though that any co-operation is appreciated.

Speaking of next issue what do you know about DeForest Crosley? Do you have a vintage set or some tid-bit? Drop a line or photo of your set if you do (best one may be on front cover!) by 1 May. Also the famous Dominion Day broadcast of 1927 - all the way from sea to sea - who remembers it or has any stories about it? I would also like to hear your response re sources of old radio program tapes (especially if you've tried them) - if I get enough I'll publish a list; and what about a column on news among the collectors or an information exchange? Send a note on your latest find or query if your interested.

A sad note...you will see that this issue is dedicated to the memory of Charles Lowry whom most of us will remember for his rather famous Mercury Superten. My aim was to put on record at this time a more complete picture of this most remarkable man. It is only regretted that time did not permit a refinement of the biographical data presented; nonetheless I think you will find it rewarding reading.

- Editor

CVWA General Meeting

Guest Speaker

Auction

SATURDAY APRIL 23 1:30pm. SHARP

110 RUMSEY RD. EAST YORK

PROGRAM:

12:30 Preview of equip to be auctioned

1:30 Meeting begins
-discussion of general business
-reports from executive

2:00 Talk by Hazel Goldenberg
-ways senior citizens can get grants to work on their old radio hobby
-what grants are available
-how to organize
-how to apply

2:30 Break for coffee
& Tube display
(bring your rarest or oddest tube to show & tell; best featured in next issue)

3:00 Auction

Note: People bringing equipment to be auctioned should have it there by 12:30 sharp.

CHARLES A. LOWRY

Although I met the man but once, in his last days, it is still with great regret that I note the passing of Charles A. Lowry this 31st of December, 1976. For me it was his writings, his expressive letters and articles and, of course, his remarkable Mercury Superten radio that first gained my interest not so long ago. I soon realized however, that Charles Lowry was one of the few remaining who could vividly relate the story of those (as he so aptly put it) "very romantic and pioneer days" of radio...but, alas, too late. The loss to others who knew him as a friend was considerably greater, as you will hear recounted below. And, of course, to Mrs. Charles Lowry we extend our sincere sympathy.

In my position then, I can at best make only some introductory observations. From reading his works and questioning those with whom he worked (well into his seventies) one quickly concludes that Charles Lowry was an engineer in the true sense of the word though he never completed his formal training. He was innovative, resourceful, methodical to a very high degree. He was a proud professional. I believe that the successful production of the Mercury Superten superheterodyne so early on in Canadian, and indeed American radio development is a fine witness to the above qualities. But more than all of these, it seems, Charles Lowry was an incurable 'technical' romantic. He loved his work and productively pursued it with remarkable energy and enthusiasm well beyond the age that most men retire.

Business and administration for profit's sake were apparently given less attention than technical challenges and problems. This is not to say that his efforts were without economic or social relevance. He still possessed a keen sense of what was needed, what were the important technical requirements, e.g., the emphasis on the low battery drain of the Mercury Superten. Sometimes his analysis of a problem or situation clashed with the ideas of those around him. If his extensive logical arguments failed to convince them, then rather than compromise what he believed correct he would often move elsewhere. One instance which he himself noted in his letter published in our last bulletin was his resignation from the H.M. Kipp Co. over Kipp's refusal to convert the Mercury to an a-c tube set using Ted Roger's new tubes. Another case was related to me by Gerry Brunn of Philco-Ford of Canada Ltd. as an explanation of Charles Lowry's refusal to fly. It seems that while in Australia he could not get any of the aircraft manufacturers interested in his patent concerning the spin-up of an aircraft's landing wheels prior to touchdown to prevent burning of the rubber tires. Suffice it to say that by his analysis it was an unnecessary risk not to do so and thence onward refused to fly.

I am still pursuing acquaintances and letters, articles and tapes relating to Charles Lowry in the hope of more fully determining his contribution to the early radio art. Meanwhile, through the kind permission of Mrs. Charles Lowry, I am reprinting the eulogy given by T.I. Millen, Vice-President and General Manager, Philco-Ford of Canada Ltd. Because of the basically good nature of Charles Lowry this eulogy could well stand as a biographical sketch.

Editor

EULOGY

CHARLES LOWRY

JANUARY 3, 1977

We are here today to honour the memory of Charles Lowry - proud and competent engineer- warm personality - and friend. This group assembled here recall the last productive and memorable 25 years, of a lifetime of 81 years, which has been lived to the full. Charles has touched many lives throughout his lifetime and I cannot believe that any would remember him as other than a good friend. Nonetheless, as we knew him, his vocation was his avocation. In what we now call the "Electronics Age", and was for many years referred to as the "Radio Age", Charles Lowry lived through nearly all the development of the electronics revolution- from simple morse code communication through radio telephone, to broadcasting; radar; space communication and the present computer era.

As this scientific evolution has been so much of Charles Lowry's existence, it is probably fitting to recount his life in these terms. My first meeting with Charles Lowry arose from a telephone call which I received from my dear friend and mentor, Ralph Hackbush (now deceased), when he was president and general manager of Stromberg-Carlson of Canada, down on Geary Ave., and Philco was still leasing some old World War I aircraft buildings, at Dufferin and Dupont in the central west end of Toronto.

It was early January, 1953, - the message was something like this - "Ted, I have an old friend in my office today whom I have known for many years, he having worked for Stromberg-Carlson before the war (WWII). I think he could be very useful to you in your engineering department!" I said, "Send him over, I would be pleased to talk to him."

Charles Lowry came over; we had a long talk - the result being that Philco hired probably the employee oldest in years to join the company. He contributed for more than eighteen years to the growth of the firm - something that few others, starting at a much earlier age, succeeded in doing.

Charles Lowry brought with him, on that memorable day of our first meeting, a resume of his previous experience. This one was different in its varied accomplishments, and I am sure it is fitting to review this chronological outline today.

The paper started out with the usual personal data. Life commenced in a Presbyterian Manse, in the town of Hagersville, Ontario. This is a small town some 20 or so miles south of Hamilton, on what must have been a primitive road in those days. The year was 1895, and the date October 23rd. These would be the days of the horse and buggy - and sleigh in the winter-time. I can picture the Reverend and Mrs. Lowry admiring their first and only child - without the slightest inkling as to the unbelievable changes - which Charles Lowry played a part in, during the following 81 years.

I quote, almost verbatim, from Charles Lowry's resume;

1900- Educated in Ontario public and high schools variously in Hagersville; Toronto; Newcastle; Port Hope and Niagara Falls.

-Moving around with his father and mother, as was the custom, as they ministered in the various communities to which the reverend was summoned.

1908 Charles Lowry showed his early interest in this new science of radio, as he opened his first amateur station at the age of 13.

1916- Served in Royal Navy, North Atlantic and West Indies squadron, as wireless operator.

1919- As the War ended and amateur radio pursuits were again allowed he re-opened amateur radio station, with the call letters 3AV/9AV.

- 1919- Sailed Great Lakes as radio operator(summer).
 1920- Held Berne Convention telegraphist licence #261.
 1919- Studied Electrical Engineering at University of Toronto but
 1923- did not write examinations owing to eye illness and sinus trouble; aftermath of war injury, which limited study.
 Chief instructor at Carson's Wireless School, Toronto.
 Consultant on radio to Powley and Moody Ltd., Toronto Agents for Mullard Valve Company of England.
 Chief Engineer, Radio Devices Ltd. Gananoque, Ontario (Subsidiary of Parminter and Bullock Ltd.)
 - above activities interlaced during part-time university study.
 President, Wireless Association Of Ontario (A.R.R.L.) - an association of amateur radio operators, which still exists and still publishes its magazine, QST.
 1923- Chief Engineer, H.M. Kipp Co. Ltd. Toronto Canada - designed and supervised the manufacture of 'Mercury Superten Radio' - the first mass-produced superheterodyne receiver ever made anywhere.
 1924- Designed first-known single dial radio tuner of commercial form and exhibited at Canadian National Exhibition.
 1925- Applied single dial principle to Mercury Superheterodyne.
 Converted 'Mercury' to wide range all wave.
 1925- In cooperation with radio station CFCA, Toronto Star station,
 1926- used 'Mercury Superten' receiver to re-broadcast English shortwave programs. We successfully relayed 365 consecutive daily intelligible programs before ending the service when other agencies caught up with us and program relays became commonplace.
 1927- Associate member Toronto section, I.R.E.
 1927- Test Engineer, Later plant radio engineer, DeForest Radio Corporation Toronto (Company later absorbed by Borg-Warner, 1933).
 1933- Chief Engineer, Polymet/Aerovox of Canada Limited, Hamilton.
 1935- Moved to the United States and took charge of radio prototype application lab., Stromberg-Carlson Telephone Manufacturing Co. Inc., Rochester, New York, as a "Product Engineer".
 There he stayed until 1939, at which time Stromberg-Carlson need some one to help them with their Australian Company. Charles Lowry was sent to Sydney, Australia.
 1939- Production Engineer, Stromberg-Carlson (Australasia) Pty. Ltd.
 1940- Sydney, N.S.W.
 1941- Engineer, Syme, E.S.M. Pty. Ltd., Sydney, Australia. Defense production: Aircraft components. (These were the second war years)
 1942- Project Engineer, Commonwealth Aircraft Corporation (Crown company) Beaufort Division, Sydney, Australia.
 1944- In charge of planning and machine loading in Dowty landing gear plant. Developed an automatic self-computing machine load planning machine which was used to maintain full 20-hour per day loading of all machines in heavy machine shop, producing landing gear for aircraft.
 At the same time, Charles did not waste his spare time....
 1941- Honorary instructor, Eastern Command School of Signals, South Head, Sydney, Australia. This action involved voluntary unpaid service, after working hours each night and weekends, instructing recruits to the Australian army in Electronic Theory and practice and in communications; Morse Code and the like, - connection ended in 1944 when the school was moved (out of commuting range to Ingleburn. This work was sponsored by the I.R.E. Australia, who screened the volunteers for this task, and prescribed the courses of study.
 His final war assignment was with Philips, as-
 1944- Engineer, Philips Electrical Industries of Australia Pty. Ltd.,
 1945- Sydney, engaged on research and development of improved field signal generators for Royal Australian Air Force Company under Crown control at this time.
 1945- Examiner of Patents, Commonwealth Patent Office, Canberra,
 1951- A.C.T. Australia. Engaged in examination of patent applications in the field of pulse communication: microwave radio navigation aids and TV. Also took part in work connected with the development of a coded searching system based on Hollerith Machines (the IBM card is the outgrowth of the Hollerith Card). In the course of this work, I read, technically classified and "coded" some 10,000 patent specifications. My "code" is one of several (other classes) now in daily use in the said patent office. (The Australian Patent Office is the only one in the world, so far, which has succeeded in making a machine-sorted, "coded" search, work) (this written in 1951 as addendum)
 1946- Member, Professional Officers Association of Australia.
 1951- (December) Resigned at patent office and returned to Canada. Owing to delay, incident to foreign investigation on "security" was unemployed for first six months of 1952.
 1952- While awaiting security clearance, took up work as service manager, Caplan Radio Co., Toronto.
 1952- (Took up his old interest in patents, as...) Patent writer and consultant, Marsden and Bromley, Patent Attorneys, 605 C.P.R. Building, Toronto, Canada.

On January 26, 1953, Charles Lowry joined Philco Corporation of Canada Ltd., firstly as "Project Engineer, Radio" and then as "Advanced Planning Engineer" associated with new consumer products, such as stereo; hi-fi and other special assignments. Examples: development of facilities, including special test gear, for sound pressure testing and evaluation of loud speakers; assessment of market suitability of hi-fi package equipments; development of transistorized and automatic auto-radio designs; combination hi-fi and TV equipment; basic design features and the like; design of semi-automatic test equipment for TV production. Design of automatic equipment for testing of auto radio receivers; design of facilities for TV and other devices, for TV and auto radio production.

From early 1968 until late 1970, Charles Lowry acted as systems engineer and project coordinator on the Philco-Canada development of automatic alignment test for auto radio production: one of the most significant developments in auto radio production in recent years.

As an indication of his effort in this venture, I will now read excerpts from a memo written by Gerry Brunn, Manager of Engineering, dated June 11, 1970:

Memo to personnel file: Charles Lowry, commendation in recognition of his unique contribution to the design of the automatic tuner alignment facility for auto radio production.

"With the completion of the above project, it would seem appropriate to acknowledge in a special way the major contribution which was made by the senior member of the engineering team.

Mr. C. Lowry had been assigned to this very complex project as the advance planning and the electro-mechanical systems engineer, for a period of about 1-3/4 years (1968/69). Mr. Lowry designed nearly all the Mechanical parts and assembly layouts for this equipment. Moreover, he physically produced a great many of these parts in the shop and he almost single-handedly assembled the original prototype. In view of his age (74 years) this was an exceptional achievement, which he accomplished with such remarkable vigor and efficiency that a younger man would be hard put to do better.

Mr. Lowry's many years of diversified experience have proven to be a most valuable asset. He has more than 17 years of service with Philco-Canada."

Signed: G.F. Brunn

Manager of Engineering

Charles Lowry must have been one of the oldest members of the Institute of Electrical and Electronic Engineers, having joined the old Institute of Radio Engineers in 1927, a membership lasting more than 39 years. He was also active in trying to re-establish a society for very early contributors to the art of radio communications, dating to the early 1900's.

Charles Lowry was also to be remembered as a sociable and friendly help to many around him - always ready to make a kindly remark or a helpful suggestion; ready to pitch in on a difficult task or to help someone personally, if he could. Charles was conscientious to the limit - a note from the files indicates his concern (and I quote)-

to T.I.M July 20, 1962.

"In the unlikely (I hope) event that there should be a need to reach me during my holidays, the best clues I can offer are that we are heading west on Sat. morning via Stratford (pause) Sarnia, Port Huron, Muskegon (pause) Milwaukee (pause) Green Bay Wisconsin, and then touring more or less without schedule in the area of the Norwegian colony in the Wisconsin dells. We plan to be back in Canada, homeward bound on the last Sunday. Expect to be home on Bank Holiday!"

Signed, Charles Lowry.

Yes, Charles did come back on Bank Holiday, 1962, and stayed on the job for more than eight years, until it was time for him to try to enjoy other pursuits -- he was then over 75 years old.

He moved closer to Philco, to be ready to assist if need be. He re-established his amateur radio station - and kept in touch with us all to the end.

Yes, we will all remember Charles Lowry as a man who remained useful constructive and innovative to the end of his years - a fine engineer and a true friend.

Q R K

A little over 50 years ago (Oct. 1924) British and New Zealand amateurs achieved a long distance record (half way around the world) on approx. 3.1 MHz. (95 M). This first time ever achievement was not a chance happening but done by careful planning by the small group involved. They were aware of the peaking of radio signals in this band around sunrise and sunset. They therefore carried out their tests at these times of day. Each day a different code would be used for positive identifications

Some of those taking part at the time were: Z4AA,Z4AG,Z4AK, (G)20D, (G)2SZ, and(G)2NM.

Have you ever wondered what happened to that first CQ you sent back in 1928 - or was it '29? There have been some reports in the past of long delayed echoes being received on the H.F. bands. That CQ you sent, way back when, would most likely go on and on into space but some time some of its energy would be reflected back to earth by some interplanetary object.

G3XJE, of Cavendish Laboratory in England, carried out a project in 1973 to prove whether or not long-delay echoes really do exist. About half-a-million automatic transmissions were sent on 7,9 and 20 MHz. and it was concluded that this research failed to detect any such echoes.

It has been learned that Roy Usher (VE6EA) has acquired an HRO receiver with 2.5 volt tubes. It may very well be one of the first models manufactured by National. Anyway, Roy, it sounds like a good find.

Have you noticed the article in Dec. '76 CQ (p.44) about the famous 210 tube? The article is titled "The Famous 210 Tube: Its Birth, Life and Death".

Your Qrk ed. will be pleased to hear of any museum (private or public) no matter how small to include in a future listing of radio museums.

73,
Bert (VE3DPB)

(from The Wireless
Experimenter's
Manual, E. Bucher
c. 1919)

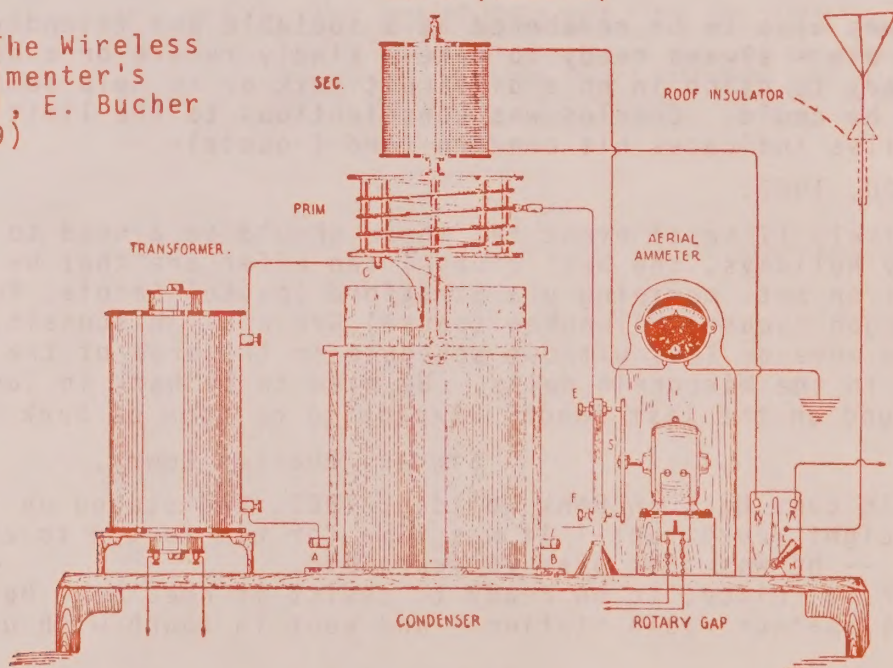


Fig. 99. Modified design for an amateur transmitter.

"MAN ABOUT NEWS"

by Alex Nickerson

(The Chronicle-Herald
31 Dec. 1976)

Bloopers moggle the bind

The entry of rapidly increasing numbers of U.S. professional athletes into the ranks of the highest paid citizens of the Republic — a club that once was reserved for Hollywood tycoons, bankers, automobile industry executives and Wall Street wizards — has led, understandably, to a rush by the advertising industry to enlist their talents in radio and television sales campaigns.

To date, one is able to report, there have been no major disasters caused by monumental gaffers such as the case many years ago when Babe Ruth was hired to push a breakfast food. If memory serves, the product was Toasties. The Babe was supposed to say how this particular delicacy built up his strength to hit home runs. But to the horror of the interviewer over the national network, the Babe, upon questioning, allowed that his favorite breakfast food was Wheaties — the leading rival of Toasties. Actually he never ate either — a big steak was more to his liking.

When it comes to bloopers on television and radio, no one is excluded. Announcer Harry Von Zell may have been guilty of the biggest blooper in all broadcasting history when he blurted: "Ladies and gentlemen, the President of the United States, Hoobert Heever."

Sometimes even the most routine lines can be flubbed as Howard Cosell did, starting his five-minute syndicated radio show one day. "Hello Howard Cosell, I'm everybody." He usually starts off "Hello again everyone. I'm Howard Cosell." On second thought this might not have been a blooper; Cosell's opinion of Cosell is unbounded.

Then there was the British announcer who nonchalantly told his listeners "This is the British Broadcasting Corporation."

Sometimes a television personality may not think before speaking. For instance, there was the nationally known sportscaster who in commenting on the blackout rule spoke of the "45,000 no-shows we have here tonight."

A blooper by Barbara Walters, the million-dollar-a-year co-host of ABC's evening news broadcast, is coming back to haunt her. Interviewing fashion designer Yves St. Laurent on NBC's Today Show, she said: "We know about your shirts and your jackets, but isn't it true your best ideas are in your pants?"

I would like to thank Aaron Solomon (VE1OC) of Dartmouth, Nova Scotia for sending us these nostalgic notes of Col. Nickerson. They have appeared quite regularly in this bulletin, providing us with some remarkably vivid recollections of those early days of broadcast radio. (Unfortunately this month's clipping from the 31 Dec. '76 issue of the Halifax Chronicle Herald may not print as well as the others. Somehow your editor managed to misplace both of the duplicate clippings sent by Aaron; but, alas, the news must get out....so, yet another copy was dug up at the Toronto City Hall Reference Library)



Lionel L. Shatford

In an article last year Col. Nickerson marked the 50th anniversary of station CHNS, Halifax N.S.; Aaron now draws to our attention that Lionel L. Shatford one of the founders and early program directors of CHNS died recently at the age of 82. Others concerned with the founding were Cecil A. Landry (deceased) John Redmond and Col. Wm. C. Borett.

News Briefs

**Jan. 22 '77 winter meeting (from minutes by M. Chaplin)

Considerable discussion was held on improving the program content of meetings. Alternative meeting places were suggested, possibly more suitable for audio-visual presentations. M. Fry suggested ways of darkening the present hall. C. Catalano agreed to bring a movie projector to the next meeting so that suggestions may be tried (postponed, see program p.2 -ed.).

D. Challoner requested that members owning 35 mm slides suitable for showing at a future program, contact him (or, better still, Mike Cox - ed.)

A short discussion was held on business record-keeping. S. Prior wishes to continue the existing system. J. Knott pointed out that some changes would be necessary to comply with the Constitution.

B. Coleman requests that business cards with the C.V.W.A. crest be available. C. Catalano suggested that name tags be worn at Meetings by members.

S. Prior conducted a mammoth draw - several members being lucky.

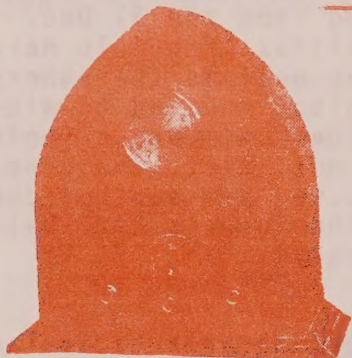
The unusual vacuum tube program was postponed for a future meeting.

***Mar. 4 '77 executive committee meeting-

Budgets were presented by all committee members for 77-78; lots of good plans but looks like after 7 years dues must finally rise...POSSIBILITY OF CVWA DISPLAY AT ARRL MEET IN TORONTO THIS JUNE; CONTACT BERT DE KAT OR COME TO NEXT MEETING. Flash! This bulletin is coming to you FST & PST exempt, thanks to the efforts of W. Choat and your ed.--a saving of \$30 tax per issue!

GOLDUST

By Sid PRIOR



*Woodstock
Elec. Corp.*

HEY
Winters going
Summers coming
With lots of time to
go a hunting
An A.K. here
A Grebe there
Before the winter
We will have sets to
spare.

#####



*U. S. Radio &
Television Corp.*

To the members who
sent in their 1977
dues, I say thanks,
the bank account is
O.K.

#####



*Pierce Airo,
Inc.*

Thank you Fellows, for
all the lovely Xmas
cards.

#####



Republic Radio Co.

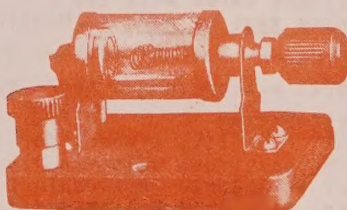


*Cardinal Radio
Mfg. Co.*

The A.W.A. Conference
could be in the
FORD MUSEUM in
DEARBORNE, MICHIGAN
this year.

MORE LATER.

#####



Colin B. Kennedy Corp.

*MORE Next
ISSUE*

The MEN WHO MADE RADIO



THE INVENTOR OF THE FIRST SENSITIVE DETECTOR

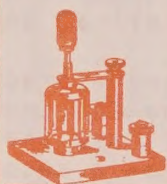
BEFORE 1903 the antiquated coherer was the most sensitive radio wave detector. Professor REGINALD A. FESSENDEN, an American, patented at that date a liquid detector. A silver-plated platinum wire, just barely touching a weak solution of nitric acid, formed Fessenden's electrolytic detector. Chemical action between the metal and acid was believed to build up an insulating film of gas around the wire. The detector behaves like a rectifier, possibly because radio waves in only one direction can break down the obstructing film.



THE FIRST TO PROPOSE ELECTRIC POWER TRANSMISSION BY WIRELESS

WHILE most popularly known for his alternating current motor and high-frequency oscillator, NIKOLA TESLA is more directly associated with the work preceding radio experiments on account of his wireless power transmission schemes. Realizing that it requires tremendous pressure to force an electric wave through the atmosphere at sea level and considerably less in the rarified air above the earth, Tesla in 1892 proposed to erect towers on mountain tops between which electric energy might be transmitted through the air.

What a lovely Hobby these Boys started.
#####



THE FIRST MAN TO SPAN THE ATLANTIC BY RADIO

WITH the heritage of numerous investigators and his own ingenuity and persistence, GUGLIELMO MARCONI, in 1901 succeeded in transmitting the letter "S" in Morse code by radio from Poldhu, England, to St. John's, Newfoundland. He used an elevated wire for an antenna, a ground connection and a large induction coil to produce electric oscillations that were detected with a coherer. Previous to this Marconi had transmitted over a distance of 34 miles at sea. As a pupil of Professor Augusto Righi at Bologna, Italy, Marconi became interested in the experiments of Hertz, the first man to create and detect electric waves.



THE PARENT OF THE TWO-ELEMENT VACUUM TUBE

PROFESSOR J. A. FLEMING of London was familiar with Edison's experiments with discharges of particles from a filament in an incandescent lamp, called "the Edison effect." In 1902 he employed a modification of one of Edison's lamps to detect electromagnetic waves and called it the thermionic valve. He succeeded in using it as a rectifier in a radio receiving circuit, and it was proved later in the laboratory that his valve could oscillate. His detector had only two elements whereas those used today have three.



THE ELECTRIC TELEGRAPH

by

Noble E. Haughton

Although the subject of dreams for many years, the practical beginning of the electric telegraph came with the appearance of the Daniel electric cell in 1836. Up to that time cells polarized so rapidly that it was not possible to obtain a steady electric current from them; however, the non-polarizing Daniel cell at once removed all difficulties in this respect.

In the year 1837, three separate practical telegraphs were invented; Morse in United States, Wheatstone and Cook in England and Seinheil in Munich; Steinhil's great discovery was the practicability of using the earth for a return path rather than a second wire for this purpose.

Morse seems to have gotten the credit for an electromagnetic system of short and long impulses (the dots and dashes). He produced the code in the form of electrical pulses and a device for recording them on tape. His first message was passed in 1844, the impulses being recorded on a moving tape and the pulses interpreted as dots and dashes.

Somewhat strangely, interpretation by ear had not occurred until some time later when the codes had been (from use) memorized and the telegraph became reality as we know it.

Wheatstone (England) developed high speed dot and dash transmission, obtaining speeds as great as 400 words per minute. Of course, these had to be translated down to normal speeds, but by employing several or more "readers" this presented no problem.

Europe, by and large, went in for (to a degree) mechanical devices in place of human ears and fingers and produced early versions of our present "teletypes".

As equipment improved and public demand increased, (with added costs) thoughts dwelt on much advanced ideas as two messages - and then four - all on the one wire and at the same time! Thus was developed the "duplex" telegraph i.e. four telegraphers two at each end - quite a saving in line equipment!

Not content with this, Thomas A. Edison (largely) developed the "quadruplex"; four telegraphers at each end - four messages simultaneously - all on the one wire!

This was the limit - other methods were under development - girls with stenographic experience only - operating multiplex equipment (to the disgust - and a degree of fear also - on the part of the morse telegraphers)

And now it's all over! Finished and done after 128 years of dots and dashes! According to Time magazine the last message transmitted by dots and dashes was sent from the little C.P. railway station at Batisca, Province of Quebec.

-30-

(excerpts from "Electricity", London, c. 1915)

SPECIAL REQUEST

Please, all future requests for schematics for vintage radios must be mailed to:

MIKE BATSCHE
278 SUTHERLAND DR.
TORONTO, ONTARIO
CANADA

TELEPHONE COMPANY RADIOS



WESTERN ELECTRIC
48 SUPER

This excerpt from Gleason L. Archer's Big Business and Radio (c. 1939) is typical of his coverage of the colourful struggle between the Telephone Company (AT&T) and RCA for the booming radio business. The setting here is an interlude in the dispute between the two corporate giants as arbitrator R.W. Boyden recovers from a personal loss. It seems that the original cross-licensing agreement between RCA and AT&T did not clearly exclude the latter from the lucrative broadcast radio business - at least in the view of AT&T. And at least until the outcome of the arbitration proceedings the Telephone Company was obviously determined to keep its hand in.

The main players for RCA are David Sarnoff and General Harbord and for AT&T, Mr. Harkness and Mr. Gifford; the two receivers in concern are early models of the Western Electric 4-B and RCA Radiola Super VIII superheterodynes.....

Sec. 62. Telephone Company Steals a March on RCA.

The death of Mrs. Roland W. Boyden occurred in Boston on May 7, 1934. The arbitration proceedings must necessarily wait until the

bereaved husband could have opportunity to recover from the shock of the event. In the meantime, a development had occurred in the strained relations between the two groups that caused considerable perturbation at RCA. Mention has been made of the Telephone Company's experimental superheterodyne radio set. The officials of RCA had long been apprehensive lest the Telephone Company, now so belligerent, should actually go into the business of selling them.

In the latter part of April, 1924, a rumor had come to David Sarnoff that the Western Electric Company had not only gone into the market but had actually installed one of their new radio sets in the White House in Washington, at the very time when an RCA set was about to be installed. Naturally, this caused "fireworks" in the home office of RCA. The Washington branch of the company was called upon for information. The reply from F. P. Guthrie to David Sarnoff is illuminating:

April 30, 1924

To: Mr. David Sarnoff

From: F. P. Guthrie

Subject: New Western Electric Superheterodyne-Type 4-B

Dear Mr. Sarnoff:

This afternoon I went to the Navy Department to see the new Western Electric set which has been submitted as being "much better" than our Superheterodyne.

The set which they have bears the type number 4-B, serial number twenty-six, and seems to be a six tube Superheterodyne set, using Western Electric "peanut" tubes. The output of this set goes to an ordinary Western Electric three tube power amplifier, the output of which in turn passes to one of their new parchment-cone Rochelle-salt loud speakers.

The set is operated by storage batteries, and while it seems to give good results, it is not at all ornamental, and seems to use nine tubes to do the work that six tubes in our set do.

The tone of the new loud speaker seems to resemble very closely the tone of the loud speaker in our Radiola X. I called Commander Langworthy's attention to the fact that it would be quite a simple matter to attach the Western Electric loud speaker to our Superheterodyne, so as to get a comparative test of the sets themselves rather than the loud speakers only.

I will keep closely in touch with this situation and advise you of any further developments.

Yours very truly,

(Signed) F. P. GUTHRIE

Mr. Sarnoff's reaction to the report is typical of the man. Before descending upon the Telephone Company with accusations of bad

faith, he desired to be armed with authentic information. This accounts for the following letter:

Subject: New Western Electric Superheterodyne

May 1, 1924

Dear Mr. Guthrie:

I have your letter of the 30th ultimo on the above subject. I will be obliged if you will review the situation for me in a memorandum from the beginning, stating just how we came to install a set in the White House and how the Western Electric Company injected itself.

I am rather inclined to think that their action in this case is one that would not be sanctioned by their executive officers if they knew about it, and I want to lay it before them. But before doing so, I should like your full information based on the facts.

Yours very truly,

(Signed) DAVID SARNOFF

Mr. Guthrie's second letter relates at some length the history of radio sets in the White House, the first having been installed by the Shipping Board during the Harding administration. A question had recently arisen of installing a modern set. Mr. Guthrie had recommended a Radiola Super VIII.

"The set was duly received and carefully calibrated at our service station," he reported. "When it was ready for delivery I called Commander _____ by telephone and advised him; he said he would let me know in a few days what to do with it. When he did not call me I went down to see him in order to find out what was up, and he told me that the matter had been somewhat complicated by the fact that the Western Electric Company had requested permission to submit one of their new sets for comparison, which was described as being 'much better' than our superheterodyne."

Demonstration had apparently convinced the official that the Western Electric radio set was indeed as represented—superior in operation to the Radiola Super VIII. Mr. Guthrie closed his recital by saying: "This is essentially a government sale, and as such, it would not seem to be in violation of the agreement between ourselves and the Western Electric Company."

It is significant that in transmitting this report to General Harbord, Mr. Sarnoff wrote in pencil in the upper margin of the letter:

"Guthrie talks like a reasonable man—DS"

Mr. Sarnoff's letter to General Harbord transmitting the correspondence reveals how fully he appreciated the significance of the

event and also of other similar sales. His reference to "upsetting the apple cart" was clearly not overdrawn. RCA engineers realized all too well that the Radiola Super VIII then in production, to be sold at popular prices, could not be expected to equal in performance the "simple sets" being produced by the Western Electric Company presumably without much regard to cost of production. The existence of such sets becoming noised abroad might actually destroy the market for Radiola Super VIII. The letter reads thus:

May 19, 1924

Dear General Harbord:

I attach hereto several letters which indicate that the Western Electric Company has actually gone out aggressively to sell superheterodyne sets in the market, and that the effect of this is being noticed throughout the country. We have had numerous inquiries on this subject and are rather embarrassed about how to answer these inquiries or how to handle this subject. I talked with Mr. Harkness personally over the telephone this morning about the case of the Bankers Life Insurance Company of Des Moines, and told him that you and Mr. Gifford had reached an understanding at the time we decided on arbitration, that pending the decision of the arbitrator, neither side would engage in activities beyond those in which they were engaged at the time arbitration was undertaken.

Mr. Harkness said that he quite understood that, but that he did not regard these cases as violating the understanding between you and Mr. Gifford, because they regarded sales such as those made to the Bankers Life Insurance Company as a sale for specific use by customers desiring to receive from a given station. I asked him what would stop these receivers from functioning in the way that any ordinary broadcasting receiver does, namely, to receive from any broadcasting station within close range, but he merely replied that this was "up to the purchaser."

In view of my contemplated absence this week, I suggest the following course:

1. That you refer these papers to Mr. Adams, who should take them up with Mr. Fish for such bearings as they might have on the arbitration proceedings commencing this week.

2. That you take this matter up with Mr. Gifford and acquaint him with the embarrassment to which the Radiola Corporation is being subjected pending the decision of the arbitrator.

The mere fact that the Western Electric Company is now actively putting superheterodyne sets on the market will "upset the apple cart," and require each of us to make some explanations to the trade and the public pending the decision of the arbitrator. If the arbitrator should decide that the Telephone Company has not the right to engage in such activities, then it would seem to me that the Western Electric Company would be more seriously embarrassed with the pub-

lic than they would have been if they had not engaged in them until and unless the arbitrator decided in their favor.

Respectfully,

(Signed) DAVID SARNOFF

Evidently Mr. Sarnoff had already propounded the question of "understanding" between the corporations to Mr. Adams, since we discover in the files a letter from Ira J. Adams to Mr. Sarnoff, dated May 20th, that apparently disposes of the matter. There is no evidence in the records that indicates any further action on the part of Mr. Sarnoff. Neither do we find in the transcript of the arbitration proceedings any reference to the incident. The letter itself is as follows:

May 20, 1924

To: Mr. D. Sarnoff
From: I. J. Adams
Subject: Western Electric Superheterodynes

Dear Mr. Sarnoff:

I have your letter of May 16th with attached correspondence. I do not recall that the companies ever reached any understanding that they would preserve the status quo pending the arbitration. I think you refer to a letter that General Harbord wrote to Mr. Gifford on April 3, 1924, as per attached copy. I am also attaching Mr. Gifford's reply to this letter.

We have been receiving requests for bids on certain apparatus that we may or may not have licenses to supply. In many of the cases we did not have the apparatus designed and we did not want to enter into the business until the arbitrator had definitely decided whether or not we are licensed in the particular fields involved. After declining to quote on these orders the customer usually came back with a request for information as to who is able to supply the apparatus. During the arbitration we did not like to refer orders to the Telephone Company for fear that it might prejudice the arbitration. Consequently I requested General Harbord to make an arrangement with the Telephone Company whereby either company could refer orders to the other without prejudicing or in any way affecting the arbitration. This is the purpose of the two letters that I am referring to.

I do not know of any agreement between the companies whereby each one agrees to preserve the status quo and I doubt that any such agreement has been made, particularly since no one would be able to know what the status quo is. The letters that you sent me, however, are of particular interest in the arbitration and I am sending them to Mr. Fish.

(Signed) IRA J. ADAMS

The letters exchanged between General Harbord and Mr. Gifford,

referred to above, related to ordinary exchange of business courtesies and could not be construed as pledging the Telephone Group to refrain from sales of radio sets.



RADIOLA VIII
6 TUBE SUPER-
PORTABLE

Should any of you wish to read more of this intriguing corporate power struggle told in the same style with first hand records of the key people I would strongly recommend this book which has been reprinted by:

ARNO PRESS
A New York Times Company
330 Madison Avenue
New York N.Y. 10017

Although much is probably known by our members about the Radiola Super VIII, the W.E.4-B may be a relatively uncommon receiver. While visiting Morgan McMahon a few years ago I raised the subject and also expressed my interest in relating the Western Electric supers to the Canadian, Northern Electric supers such as the R-4, manufactured in Montreal about the same time as the W.E.4-B. They are distinctly different sets though both are of the 6-peanut-tube superhet variety. Morgan later found a description of the W.E.4-B in Charles R. Leutz's Modern Radio Reception and kindly sent me a copy of the schematic. (Note, the two sets pictured herein are taken from Morgan's book, Vintage Radio)

I hope to be able to say more on the subject of "Telephone Company radios" but I would first invite the correspondence of our members from the U.S. and Canada. For, as even RCA would admit, they were finely crafted sets; though, in fairness, they were too rich to be a competitive threat to their mass-produced Radioalases.

Canadians eager to duplicate experiments

Can the Russians transmit electric power without wires?

By STEPHEN AUG

© Washington Star

WASHINGTON — Have the Russians learned how to transmit electric power without the use of wires?

For months now, some mysterious Russian radio signals have been disrupting world-wide communications, and a number of Canadians who have been monitoring the signals are speculating that the Russians may have accomplished that feat.

Although they have no proof that these signals involve transmission of electrical energy, Canadians contend that the Russians may be experimenting with a long-disused process developed by Nikola Tesla, the Yugoslav inventor who died in 1943.

Important discovery

In what he considered his most important discovery, Tesla in 1900 proved that the earth could be used as a conductor of electricity and would be as responsive as a tuning fork to electrical vibrations of a certain pitch. His experiments succeeded in lighting 200

electric lamps from a distance of 25 miles without wires. Some use was made of his process for many years in Canada.

Tesla gave a number of possible uses for his equipment, including power transmission, geological exploration, national defence and weather modification.

But much of Tesla's work was never completed and his ideas remain in his notebooks which are on file in the Tesla Museum in Belgrade.

Fuelling the speculation in Canada is the report that a Soviet scientist, so far unidentified, spent several months in Quebec occasionally interviewing Tesla's last known living assistant, Arthur Matthews.

In a recent telephone interview, Mr. Matthews said he had had "a lot of questions from a lot of people," some of whom had "Russian-sounding names." He added, "I've been reluctant to tell them anything that would be important."

But he added that he had heard the Russian radio signals: he had received phone calls from Government officials in Ottawa asking about them and had,

in fact, "received letters from all over the world on this same subject."

Questions concerning the possibilities of the Russian experiments were brought to the Department of Communications in Ottawa last winter by Andrew Michrowski, who had been working with a Canadian senator on the question of resurrecting Tesla's experiments as a means of helping alleviate some electric energy problems in eastern Canada.

Analyze signals

W. W. Scott, director of operations at the department, said that after Mr. Michrowski's request for help, all nine of the department's listening posts were asked to analyze the Russian signals. By this time, however, the Russians, in response to a barrage of complaints primarily from other European governments, had begun to limit the duration of the transmissions that were causing the interference.

Mr. Scott said it was determined that, although the signals originated several thousand miles east of Canada, the monitoring stations noticed

that the same signals were heard coming around in the opposite direction, from the west, with greater intensity a half hour later.

The signals were heard in the high frequency bands... anywhere from 3 to 30 megahertz (one megahertz is one million cycles per second). Tesla's experiments were on very low frequencies—ranging from about 6 to 100,000 cycles per second. Mr. Scott said it was theorized, then, that the Russian transmissions may have been harmonics—multiples—of very low-frequency transmissions.

Because the Russian signals were of such short duration, however, Mr. Scott said, the transmissions stopped before monitoring personnel were able to listen on very low-frequency wave lengths.

Mr. Scott said that on at least one occasion Canadian technicians observed the signals coming from two different locations—both of them apparently close to one another—at the same time.

U.S. scientists working with the Canadian group seem to give credence to the view of what the Russians may

have achieved. One of them is Dr. Andrija Puharich of Ossining, N.Y., a physician who gave up medical practice and has devoted the past 25 years to a study of Tesla's work and electronics experimentation.

Dr. Puharich said the Canadians listed for him the frequencies on which they were hearing the Russian transmissions. "I took the actual frequencies the Canadians sent me and just worked backwards and came out with the Tesla frequencies," he said.

Far-out fields

Dr. Puharich—who says most of his research "is in far-out fields: sensory rehabilitation (trying to get deaf people to hear better), the materialization of matter and dematerialization of matter; teletransportation of physical systems (moving objects without using rockets)"—insists, however, that there is no proof yet that the Russians have perfected what Tesla began.

Support for duplicating Tesla's experiments in Canada has come from Senator Chesley Carter of Newfoundland,

who talked to Prime Minister Pierre Trudeau last Wednesday in an effort to persuade him to set up a task force and duplicate the Tesla experiments. The cost, he said, would be \$1.5-million to \$2-million.

Senator Carter's constituency has clear economic motives in such a system succeeding. Labrador has huge sources of hydroelectric power, principally on the Churchill River. In order to sell surplus power to the other Atlantic provinces, the electricity would have to be sent via transmission lines through Quebec.

Senator Carter pointed out that Quebec will not permit exportation of electric power unless it is sold to the province. Thus, at present, power from Labrador is sold at 3 mills (three-tenths of a cent) per kilowatt hour to Quebec which resells it to Consolidated Edison Co. in New York for 35 mills, Senator Carter said.

Perfecting Tesla's methods would enable power generated in Labrador to be sold directly to the other Atlantic provinces and avoid the Quebec middlemen.



NOTE ON DETECTION BY GRID CONDENSER AND LEAK

BY
W. VAN B. ROBERTS

(Technical and Test Department, Radio Corporation of America)

INTRODUCTION

When grid condenser and leak are used for detector the grid is usually kept somewhat positive. This may make the grid-to-filament a-c. resistance low compared with the external leak resistance. As the two resistances are effectively in parallel, both must be taken into account. A formula is derived showing the variation of detected current with frequency of modulation.

Fig. 1 shows connections commonly used for rectification by means of a grid condenser and leak. The plate circuit

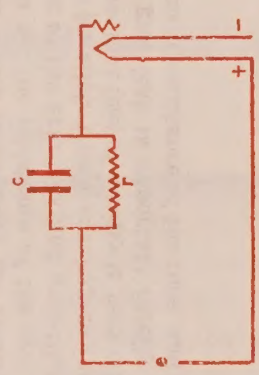


Figure 1

is not shown, as it should be so adjusted that it merely repeats the audio-frequency variation of grid potential.

Fig. 2 shows the circuit in a more general form, a battery being included to indicate that the grid return may be connected to a point of any desired potential. The impedance Z may be of any nature in the following analysis, which presupposes weak signals.

*The method used is essentially that of Carson. (Proc. of the Institute of Radio Engineers, Vol. 1, No. 2) in a paper entitled "A Theoretical Study of the Three Element Vacuum Tube."



29¢



32¢



Mounted Grid Leak Condenser
Pencil mark type grid leak condenser
mounted between the two sheets of bakelite

Let the applied voltage consist of two components, a voltage $e_0 \cos \omega_0 t$ due to the carrier, and $e_1 \cos \omega_1 t$ due to some typical side frequency. The resulting current through Z will have a number of components, but the only one that interests us is the component whose frequency is the difference between the two applied frequencies. The calculation* of this component is somewhat complicated, and for the present purpose it is sufficient to state that the magnitude of the difference frequency current varies inversely as

$\left(1 + \frac{Z_0}{R}\right) \left(1 + \frac{Z_1}{R}\right) \left(1 + \frac{Z_{1-0}}{R}\right)$ where R is the a-c. resistance between grid and filament, Z_0 is the impedance of Z at carrier frequency, Z_1 is its impedance at the typical side frequency, and Z_{1-0} is its impedance at the difference frequency.

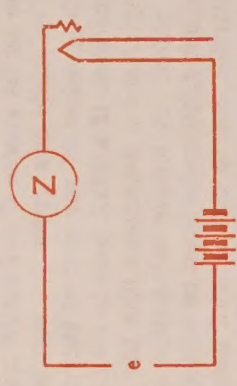


Figure 2

The voltage drop across Z due to this difference frequency current will then vary directly as $\left(\frac{R}{R + Z_0}\right)$

$\left(\frac{R}{R + Z_1}\right) \left(\frac{R Z_{1-0}}{R + Z_{1-0}}\right)$. Now the thing we are trying to find out is how this voltage drop varies with frequency. If it is independent of frequency over the audio range then no frequency distortion results from this method of detection. Let us consider each factor separately. The first factor does not change at all, as the carrier frequency is the same no matter what the audio modulation frequency may be. The second factor is not independent of the beat frequency, but is practically so because the whole audio range may be covered by varying ω_1 about one per cent or less at broadcast frequencies. Hence unless Z contains some element sharply tuned to radio

frequency the first two factors are practically constant whatever difference frequency is chosen. Any frequency distortion must then be due to the third factor varying with frequency. An idea that immediately suggests itself is to use for Z some network that has substantially the same impedance to all frequencies in the audio range, and low impedance to radio frequencies. However, before considering this idea further let us find out how much distortion is likely to be introduced by the third factor when Z is composed of the ordinary size grid condenser and leak, as in Fig. 1. From the form of the third factor it is obvious that it represents the impedance of R connected in parallel with Z , and hence of R , τ , and C all in parallel. The impedance of this combination varies inversely as

$$\sqrt{1 + \left(\frac{\tau R}{r + R} C \omega \right)^2}$$

As an example let us choose $C = 0.00025$ mfd. and $r = 5$ megohms, and calculate how great ω may be without the impedance falling below 90 per cent of the value it has at very low frequencies. If a 201A tube is used with the connections of Fig. 1 and a 5-megohm leak the value of R is about 65,000 ohms. A simple calculation shows that a frequency of about 4,500 cycles must be exceeded before the frequency distortion due to this type of detection exceeds 10 per cent. Hence such distortion is likely to be negligible in comparison with that occasioned by the use of sharply selective radio-frequency circuits. This statement has been verified by experiment, comparing the action of grid condenser and leak detection with that of C battery detection.

It is often stated that the time constant Cr should be smaller than the time of one cycle of the highest audio frequency that is to be received. If that were the case, then the combination assumed above (5 megohms and 0.00025 mfd.) would not allow satisfactory reception of audio frequencies above 800 cycles, which is contrary to experience. However the expression derived above suggests that the time constant of the condenser in parallel with the effective resistance $\frac{rR}{r+R}$ is the proper time constant to consider. Using this value and applying the time constant criterion we predict fairly good detection as high as some 60,000 cycles. This seems very high, but superheterodynes are

often built, with similar values of grid condenser and leak for the frequency changing tube, which give a satisfactory output at intermediate frequencies of this order of magnitude.

In the foregoing it has been assumed in all the illustrative examples that the grid was kept positive. If kept negative, R is no longer low compared to τ , and the proper time constant to use would be more nearly Cr . It has also been assumed that the source of applied voltage is not affected by tube losses. Actually, if the grid is kept positive, the resonance curve of the tuned circuit which supplies the input voltage will be broadened, so that less frequency distortion is produced by the tuned circuit than if C battery detection were used.

SUMMARY

It has been said that detection by the ordinary grid-condenser and leak gives poor quality (i. e. low audio frequencies favored at the expense of the higher ones) unless an undesirably small condenser or undesirably low leak resistance is used. This paper attempts to show, as simply as possible, that actually, good quality can be obtained even when using as large a grid condenser as desirable, because the resistance which determines the relative loss of high frequencies is not the resistance of the grid leak alone, but the resistance of the grid leak and grid-filament resistance of the tube in parallel. Under usual operating conditions the latter is so low that loss of quality is very slight. The resistance of the grid leak is important chiefly in determining the grid-filament resistance of the tube, and need not be low itself.



Fig. 1



Variable Grid Leak

A grid leak is necessary in the operation of vacuum tube detectors and some forms of amplifiers to permit the negative charge on the grid to discharge. A variable grid leak is most desirable. The base of this grid leak is mounted from bakelite and a pencil mark between the contact studs provides the variable resistance or leak. The metal cap is brass, finished in black. Two studs are provided with washers and nuts for panel mounting. Ship, weight, 3 ounces. 55¢

72.—Wireless and Radio Stations in Operation in Canada, Mar. 31, 1923-1925.

Kind of Stations.	1923.	1924.	1925.
Coast Stations (government-owned).....	32	31	34
Land Stations.....	1	1	1
Direction Finding Stations (government-owned).....	4	7	7
Ship Stations (government-owned).....	29	30	20
Ship Stations (commercial).....	226	232	239
Limited Coast Stations.....	1	2	2
Public Commercial Stations.....	6	7	14
Private Commercial Stations.....	44	55	57
Private Commercial Broadcasting Stations.....	51	46	63
Experimental Stations.....	57	46	44
Amateur Experimental Stations.....	1,449	1,345	533
Amateur Broadcasting Stations.....	8	22	17
* - Private Receiving Stations.....	9,656	31,600	91,996
Radio Training Schools.....	18	14	11
Radio Beacon Stations.....	-	4	5
Life Saving Stations.....	-	5	5
Licensed aircraft.....	-	-	2
Total.....	11,882	33,456	93,018

* WHERE ARE THEY NOW?

(excerpt from Canada Yearbook c. 1925)

TO THE NIAGARA PENINSULAR, BUFFALO and the
SURROUNDING AREAS:

Our sincere congratulations to C.J.R.N
RADIO STATION OF NIAGARA FALLS, The C.B.
BOYS, AMATEUR RADIO OPERATORS, SNOWMOBILERS,
4 WHEEL VEHICLE DRIVERS, and all you
wonderful PEOPLE who gave such FANTASTIC
help to the Families, Individuals, and all
who needed help over the Jan. 28 and 29,
weekend, due to the Snowstorm that occurred
in these Areas.

We of the Canadian Vintage Wireless Assn.,
admire people who go all out to be of
assistance in time of Emergency.

BLESS YOU ALL.

#####

DON'T QUOTE ME, BUT....

The Audion has proven very sensitive for use in wire-
less telephony, yet it is doubtful if it will ever come into
wide use, owing to the difficulty in manufacture and
short life. Usually quite a number of Audions have to
be tested out before one sensitive enough for general use
is found.

V.H. Laughter, 1909
"Operator's Wireless Telegraph
and Telephone Handbook"

CHARLES R. LEUTZ

I would like to locate and purchase a radio built by my father. Can anyone help me?

-Charles R. Leutz Jr.
10 Belknap Lane
Rumson, N.J. 07760

CFRB's 50th YEAR

On February 19, 1977, CFRB, Toronto, was 50 years old; it looks good for another 50, easily. The station celebrated its birthday with a special day long program of reminiscing with the old timers; the night before a party for 1000 guests was thrown at the Royal York hotel in Toronto. Many of the Toronto broadcasters were there including Ted Rogers, whose inventor father started CFRB in 1927, and who now competes as owner of stations CFTR and CHFI-FM.

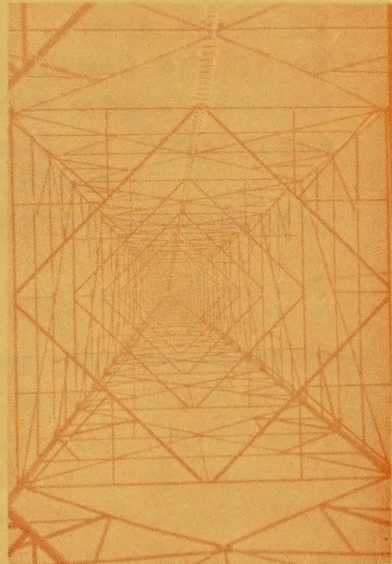
As an aside to our American readers it is commonly held that 'RB' stands for 'Rogers' Batteryless' one of the very first line of a-c sets, also made by Ted Rogers Sr. And on a present day note, one of the station's veteran broadcasters, Gordon Sinclair, whose pleas one night for recognition of American generosity in world affairs was so well received it was made into a hit record.

The best I could do for nostalgic shots was photos from the album of W.Y. Sloan (9BJ) the day he visited E.J. Bowers at CFRB in Aurora (May '35). The late Eddie Bowers first worked as engineer for Toronto Star's CFCA then moved to CFRB.



CFRB transmitter at Aurora Ontario (May 1935)

C
19 F 35
R
B



"Worm's eye view" of one of the twin towers at Aurora.

(photos from the album of the late W.Y. Sloan(9BJ), courtesy W. Choat)